

JAPANESE

[JP,2002-200243,A]

CLAIMS DETAILED DESCRIPTION TECHNICAL
FIELD PRIOR ART EFFECT OF THE INVENTION
TECHNICAL PROBLEM MEANS DESCRIPTION OF
DRAWINGS DRAWINGS

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

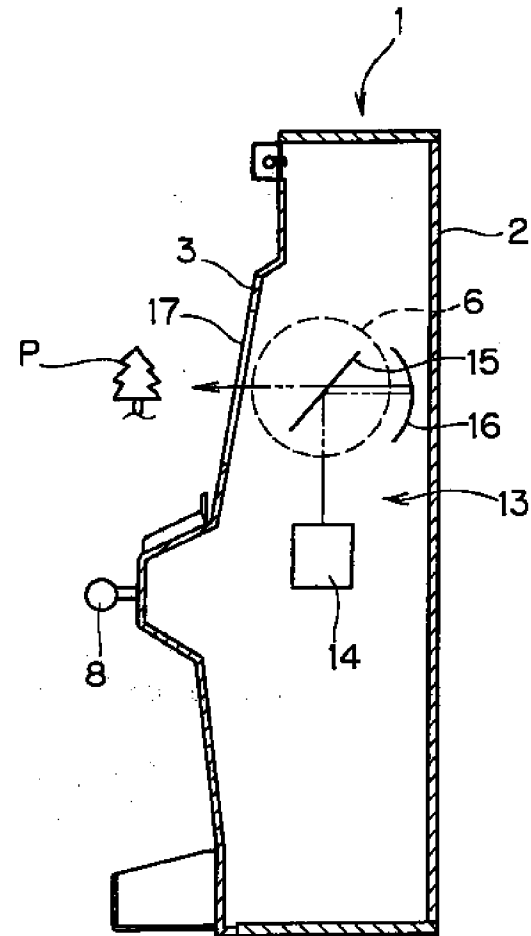
[Field of the Invention]This invention relates to the game machines provided with the pattern display to which fluctuation displaying of two or more kinds of patterns can be carried out, such as a pachinko machine and a slot machine.

[0002]

[Description of the Prior Art]If a game ball is hammered out to the game area of a game board, lots are cast corresponding to this game ball having carried out the ON ball to the start opening and that lottery result wins the Dainyuu prize from the former, the pachinko machine which performs special game mode (what is called "great success") is known. According to this kind of pachinko machine, in the pattern display provided in the game area of the game board, when [specific] it is made to cooperate and a pattern (mainly the same pattern) gathers, it can recognize that the lottery result won the Dainyuu prize visually.

Drawing selection

Representative draw



[Translation done.]

[0003]In this kind of pachinko machine, the pachinko machine which performs the display with a cubic effect is variously proposed noting that the display mode of the pattern in a pattern display is uniform, it stops at superficial production and a fixed limit produces also in the visual recognition effect. As the example, like JP,7-155438,A printing, carry out shape conversion and a pattern is formed into 3DCG, Like what displays this image data on a pattern display, and JP,9-66142,A printing, Deviation glasses are worn, like what catches a pattern as a stereoscopic picture, and JP,7-148311,A printing, a lenticular sheet is arranged in the front face of a liquid crystal panel, and what changes a pattern to which a superficial or three-dimensional display mode is mentioned.

[0004]

[Problem(s) to be Solved by the Invention]However, even if it is in the pachinko machine of which gazette printing of the above, their eyes of a stereoscopic picture display are turned only to the pattern in a pattern display. On the other hand, a game machine maker today when the game person population of a pachinko machine or a slot machine is increasing every year, . Are continuing providing the game machine which elaborated the plan on production in order to give originality to self goods and to aim at customer acquisition. (For example, reach action in electric spectaculars and a pachinko machine, an advance notice report, the flag notice in a slot machine, etc.) pass over these production only to the thing using the means by which conventionality has been carried out from the former called a plane picture, a sound, or light.

[0005]Therefore, the thing based on a plane picture has a uniform mode about the production of those other than a pattern display, and a fixed limit produces also in the visual recognition effect, and even the situation where a game person does not notice the thing based on a sound or light sometimes may arise.

[0006]Then, this invention was made in light of the above-mentioned problems, gives a variation to a display mode, and makes it a technical problem to provide the game machine which does so the stage effects of the game which was rich in the unexpected nature and interest of the look of the game person.

[0007]

[Means for Solving the Problem]By [specific / which become put together] having made a game machine concerning this invention that an aforementioned problem should be solved, having equipped the game machine book inside of the body with a pattern display means to which fluctuation displaying of two or more kinds of patterns is

carried out, and having defined a display pattern beforehand, In a game machine with which it was made for winning a prize to be materialized, an image display means which can display a stereoscopic picture is established separately from said pattern display means, and a stereoscopic picture was displayed separately from a pattern display by formation of conditions defined beforehand.

[0008]Into a game, a game person's look is concentrated on a pattern display means. Here, when conditions defined beforehand are satisfied, it will not expect, but another stereoscopic picture will appear, and it will move from a game person's look to the stereoscopic picture inevitably. Visual stimulation arises by the change to a stereoscopic picture from a plane picture. As a result, the visual recognition effect will increase and a game person's interest will be evoked.

[0009]As a game machine concerning this invention, said image display means is arranged to the game machine book inside of the body like claim 2 statement, and. A space part which can be recognized visually from the outside is formed in this game machine book inside of the body, and if composition which displays a stereoscopic picture in this space part is adopted, when conditions defined beforehand are satisfied, a look will move a game person to a stereoscopic picture which appears in a space part. Since this stereoscopic picture serves as a display mode which is separated from a fluctuation displaying pattern and withdrew into the back, by a stereoscopic picture which appeared suddenly, a game person is obliged to a change of a focus of an eye, and can recognize a fact of a display certainly.

[0010]As a game machine concerning this invention, said image display means is arranged to the game machine book inside of the body like claim 3 statement, and. If composition which a window part which has permeability is formed in the front part of this game machine body, and displays a stereoscopic picture on the outside of a game machine body via this window part is adopted, a stereoscopic picture, Like [since it becomes the display mode which is separated from a fluctuation displaying pattern and jumped out to the front] a game machine concerning the invention according to claim 2, by a stereoscopic picture which appeared suddenly, a game person is obliged to a change of a focus of an eye, and can recognize a fact of a display certainly.

[0011]A game machine concerning this invention A detection means according to claim 4 to be like and a game machine which discharges a game ball towards a game board and performs a game, and to detect passage of a game

ball, When a fluctuation start is directed to said pattern display means based on this detection signal, and a winning-a-prize lottery process is performed and this lottery result wins winning a prize, composition provided with a control means directed that specific makes it cooperate and having been set beforehand displays a pattern can be adopted. This expresses a pachinko machine which is one gestalt of a game machine.

[0012]And conditions for [according to claim 5] making it rush into the specific state where it is made to cooperate and can become a pattern, in like and a process in which a pattern under change is displayed one by one as one of said the conditions defined beforehand are mentioned in this case. This is a game machine which carries an informing function called a "big hit notice", thereby, can raise a game person's hope and can instigate a game person's speculative spirit up as a pattern under change is displayed.

[0013]Conditions for [according to claim 6] making it rush into the specific state where it is made to cooperate and can become a pattern, like and by displaying remaining one pattern in a process in which a pattern under change is displayed one by one, as one of said the conditions defined beforehand are mentioned. This is a game machine which carries an informing function called "a reach advance notice", and there is the same effect as a "big hit notice."

[0014]On the other hand, a game machine concerning this invention A detection means according to claim 7 to be like and a game machine which throws in a medal of a specified number which should be used for a game, and performs a game, and to detect injection number of sheets of a medal, Based on a signal outputted from an effective line determination means to determine an effective line according to injection number of sheets, the first and the second control means, and the first control means, direct a fluctuation start to said pattern display means, and. When winning-a-prize lottery (internal lottery) processing is performed and this lottery result wins winning a prize, in the specific state which made it cooperate and enabled a display of a pattern on an effective line where it was set beforehand. Based on a signal outputted from said second control means, composition provided with a control means which directs variation stopping to said pattern display means is employable. This expresses a slot machine which is one gestalt of a game machine.

[0015]And conditions for [according to claim 8] making it rush into the specific state where it is made to cooperate and can become a pattern, as one of like and said the conditions defined beforehand based on an internal lottery result are mentioned in this case. This is a game machine which

carries an announcing function called a "flag notice", and there is the same effect as a "big hit notice" and "a reach advance notice" of a pachinko machine.

[0016]

[Embodiment of the Invention] Hereafter, one embodiment of a slot machine is first described about the game machine concerning this invention based on a drawing.

[0017] Drawing 1 is an appearance perspective view of a slot machine. In the slot machine 1 concerning this embodiment, the pattern display 4 which formed the longwise reel display window 5 in 3 stable ranking and hierarchy is formed in the front panel 3 provided in the front face of the case 2, and in the case 2, it is made to correspond to the formation position of each reel display window 5, and the three reels 6 are arranged.

[0018] The belt sheet which displayed two or more kinds of patterns (not shown), such as a character, a number, a figure, and a character, is stuck on the peripheral face of each reel 6, and the reel 6 and -- during rotation, While the pattern displayed on each peripheral face appears one after another in the reel display window 5, when stopping the reel 6 and --, The pattern for each reel 6, for example, three tops, was set as the pattern display 4, and also in inside and the bottom, an upward slant to the right and the lower right are displayed in the state where it aligned on five stopping-lines L of **, and --.

[0019] According to the injection number of sheets of the medal thrown in from the medal slot 7, it comes into effect one by one, and said stopping-lines L becomes an effective line. For example, when the medal of one sheet is thrown in, stopping-lines [beside / one / central] L becomes effective, when the medal of two sheets is thrown in, stopping-lines [beside / three / the upper inside and the bottom] L and -- become effective, and when the medal of three sheets is thrown in, all five stopping-lines L and -- become effective.

[0020] And if push button operation of the stop button 9 provided corresponding to each rail 6 is carried out after it operates the lever 8 provided on the overhang side of the lower part of the front panel 3 and the three reels 6 and -- carry out rotation start all at once, the three reels 6 and -- will stop one by one. At this time, the medal of stopping-lines L which became effective by the injection number of sheets of the medal, and the specified number specific on -- defined according to the kind of that winning a prize when it was made to cooperate and the pattern located in a line and won a prize pays out.

[0021] The paid-out medal and the medal thrown in exceeding three sheets are deposited in the case 2, and the number of sheets of the deposited medal is displayed on a

medal reservoir number-of-sheets indicator (not shown). The BET button 10 provided in the overhang side is for consuming 1-3 sheets (it is three in the case of a MAX-BET button) by the push button operation, and is for the adjustment button's 11 paying a reservoir medal and receiving expenditure from the medal expenditure mouth 12. Here, it is ["which throws in a medal"] a concept including both consumption of the direct injection from the medal slot 7, and a reservoir medal.

[0022]There is the feature of this embodiment in having carried the stereoscopic picture generator 13 for the announcing function mentioned later in the case 2, as shown in drawing 2. This stereoscopic picture generator 13 is provided with the following.

The image display device 14 which turned the display screen upward and has been arranged.

The half mirror 15 arranged above this image display device 14.

The concave mirror 16 which turned the reflector (concave surface) ahead and has been arranged behind the half mirror 15.

[0023]Said image display device 14 consists of a two-dimensional display which displays a superficial original image (cross section image of a stereoscopic picture) on the display screen, and it is [image display device] switchable in an original image at high speed. Inclined arrangement is carried out at the angle of 45 degrees to the light of the original image which enters from a lower part, and while changing direction 90 degrees back and reflecting the light, the light which enters from back can be made, as for said half mirror 15, to penetrate ahead as it is.

[0024]By giving aluminum vacuum evaporation etc. to an inside reflector, improvement in reflectance is achieved and said concave mirror 16 carries out total internal reflection of the incident light, and in the predetermined focal distance, it has predetermined lens curvature and it is formed so that the reflected picture may carry out image formation. The composition which the concave mirror 16 performs a both-way straight-line motion to a cross direction by a vibration generating means (not shown), and carries out high-speed vibration is adopted.

[0025]According to the stereoscopic picture generator 13 constituted in this way, high-speed vibration of the concave mirror 16 is carried out by a vibration generating means, and the original image displayed on the image display device 14 is changed at high speed in this case. By the half mirror 15, direction is changed back, it is reflected, and this original image is reflected towards a front focus with the concave

mirror 16. Image formation of this catoptric light that penetrated the half mirror 15 is carried out in the front position of the front panel 3 and the picture transmission window 17 formed beside the pattern display 4 in more detail, and it forms a picture.

[0026]Like an original image, if it sees momentarily, although this picture is a two-dimensional picture, it is vibrating the concave mirror 16 at high speed, and the image formation position of a picture will carry out fine movement at high speed, it will turn into the stereoscopic picture (solid virtual image) P according to the residual image phenomenon of people's eyes, and will emerge to the front position of the picture transmission window 17.

[0027]By what the second image display device for which two-dimensional plane pictures, such as a background, are displayed is arranged for behind the concave mirror 16 when the concave mirror 16 is used as a half mirror by making thin the metal evaporated film of the reflector of the concave mirror 16, and lowering the rate of a light reflex. What the stereoscopic picture and the plane picture piled up mutually can be displayed on the front position of the picture transmission window 17.

[0028]Drawing 3 is a block diagram showing the electric composition of the slot machine 1 concerning this embodiment. The slot machine 1 is provided with the control section 20 which has RAM23 and the random number generator 24 which are used for reading and writing of CPU21 which is a subject of control and an operation, ROM22 a game control program is remembered to be, and data.

[0029]Various kinds of input output sections are connected to said CPU21 via the bus 25. As an input part, the stop button 9 of 8 or 3 levers, --, the BET button 10, the adjustment button 11, the medal injection sensor 26 that detects the number of sheets of the medal thrown in from the medal slot 7, etc. are connected, and these signals are inputted into CPU21. As an outputting part, 29, such as an indicator lamp used for the time of the three reels 6, the reel drive part 27 of -- which performs rotation start, stop, and drawing in, the medal expenditure part 28 which pays out the medal according to the kind of winning a prize, and special game mode, the check of an effective line, the electric spectacles of a machine, etc., -- and. Said stereoscopic picture generator 13 is connected and various kinds of outputting parts are controlled based on said input signal.

[0030]Whenever this slot machine 1 operated the lever 8, it cast lots with the random number generator 24 of the control section 20, the pattern made located in a line on an effective

line according to the lottery result constructed it, and it determined *****, namely, the perfect probability method which determines winning a prize and un-winning a prize is used for it by casting lots for every game. Two kinds, the special prize which consists of "big bonus (henceforth BB) winning a prize" and "regular bonus (henceforth RB) winning a prize", and other accessory case prizes (henceforth SB), are set to winning a prize.

[0031]The individual flag according to the winning a prize when winning a prize is won in a lottery process (in F_{BB} and RB winning a prize, F_{RB} and SB winning a prize are [BB winning a prize] F_{SB} (in SB winning a prize, although an individual flag is given for every kind of pattern)) naming generically -- F_{SB} -- carrying out -- it is given and these flags are memorized by RAM23 (what is called a thing called saying "a flag stands"). If flag F_{BB} for special prizes and F_{RB} stand, each reel 9 and --, For example, if it is controlled to draw a pattern for special prizes like "7" and "BAR" on an effective line, and to be able to stop and flag F_{SB} for accessory case prizes stands, each reel 9 and -- will be controlled to draw the pattern for which accessory case prizes on an effective line, and to be able to stop.

[0032]However, legal restrictions need to perform drawing-in control of the reel 9 within predetermined time, and, as a result, the number of tops which can be drawn is restricted (being what is called a "slide" usually four tops). Therefore, it is in the tolerance level of a slide, and if push button operation of the stop button 9 is not carried out, a winning-a-prize pattern cannot be stopped on an effective line, but the situation (what is called "it takes and spills") where winning a prize cannot be formed occurs in spite of having won winning a prize (the flag stands).

[0033]Therefore, when a special prize is won, flag F_{BB} for special prizes and F_{RB} are saved RAM23 until winning a prize is materialized (a special prize pattern gathers on an effective line). However, flag F_{SB} is reset, if flag F_{SB} for accessory case prizes is restricted and saved in the game and an accessory case prize is not materialized in the game. While flag F_{BB} for special prizes and F_{RB} stand and a special prize is not formed, If unlike the usual lottery process the lottery process of only an accessory case prize is performed and flag F_{SB} for accessory case prizes stands by this lottery, the reel 6 and -- will be controlled to draw the pattern for accessory case prizes preferentially, and to stop.

[0034]Thus, what is called a "JAC game" that throws in one medal and receives expenditure of the medal of 15 sheets when BB winning a prize is materialized, when [with what is called a "big chance game" that throws in three medals in the interval of this JAC game, and aims at an accessory case prize] it constructs and a 2 thru/or 3-set line crack and RB winning a prize are materialized by *****, the above-mentioned JAC game is performed once -- many -- the medal of several sheets can be won. On the other hand, if SB winning a prize is materialized, expenditure of the medal of number of sheets according to the pattern will be received, but when it is a specified pattern (what is called a "replay pattern") in it, there is no expenditure of a medal, a medal is not consumed, but one more game can be carried out.

[0035]Drawing 4 is a flow chart which shows the flow of the processing which CPU21 performs. In this flow chart, BB winning a prize and RB winning a prize shall not be divided, but flag F_{BB} single as a flag for special prizes shall be set up. first -- a game person throws in the medal of a specified number -- the lever 8 -- operating it (S10) -- CPU21 judge whether it is whether flag F_{BB} for special prizes is set, and during a special prize, after carrying out rotation start of the reel 6 and -- all at once (S20) (S30).

[0036]performing the usual lottery by the random number generator 24, when flag F_{BB} is not set (S40) -- this lottery result -- a special prize -- winning (S50) -- CPU21 sets flag F_{BB} (S60) and starts the subroutine (S70) of a flag notice.

This subroutine is later mentioned using drawing 5.

[0037]When this game is started and flag F_{BB} is carried over from the last game (S30), the lottery for accessory case prizes under special prize is performed (S80). And when this lottery result won the accessory case prize (S90) or a lottery result wins an accessory case prize in the usual lottery process (S40) in a non-special prize (S90), CPU21 sets flag s_B for accessory case prizes (S100), and starts the subroutine (S70) of a flag notice.

[0038]After a lottery process is completed after an appropriate time, it is judged to each reel 6 to rotate whether push button operation of the stop button 9 was carried out (S110), and CPU21 performs the rotation stops of each reel 6 in response to push button operation (S120). And if push button operation of all the stop buttons 9 and -- is carried out and all the reels 6 and -- stop (S130), the row together put in which pattern on each stopping-lines L will be developed.

[0039]When the special prize pattern which consists of "7-7-

7", for example is located in a line on the effective line set up according to the injection number of sheets of a medal (S140), a special prize is materialized and it shifts to special prize mode (S150). On the other hand, when [concerning an accessory case prize / specific] it is made to cooperate and a pattern is located in a line (S160), an accessory case prize is materialized and it shifts to accessory case prize mode (S170).

[0040]Drawing 5 is a flow chart which shows the flow of processing of a flag notice like ****. In the stereoscopic picture generator 13 controlled by CPU21, various kinds of original images, such as a character, a character, and a figure, project on the flat-surface screen of the image display device 14. Several sorts of original images are prepared in this embodiment. In this embodiment, if a notice type, i.e., a flag, stands 100%, not the type that certainly notifies but the semi- 100% notice type, i.e., the type which notifies of the flag standing at some a rate (reliability), will be adopted.

[0041]Therefore, when the lottery of whether to notify is first performed as the first step (S200) and it notifies as a result of a lottery (S210), the classification of the flag set is judged (S220). And when flag F_{BB} is set, the original image for a notice is chosen (S230). On the other hand, also when flag s_B is set, the original image for the notice is chosen (S240).

[0042]In ROM22 of the control section 20, the data of the original image corresponding to flag F_{BB} and the original image corresponding to flag s_B is memorized. Here, when the number of the original images corresponding to flag F_{BB} is not one, which arbitrary original images are chosen in the 1st picture selection process (S230). Similarly, when the number of the original images corresponding to flag s_B is not one, which arbitrary original images are chosen in the 2nd picture selection process (S240).

[0043]if an original image is determined, CPU21 will be pulled out out of ROM22 which stores the image data, and will be displayed on the image display device 14 of the stereoscopic picture generator 13 -- making (S250) -- oscillating instructions are given to the vibration generating means of the concave mirror 16 (S260). As a result, the stereoscopic picture concerning the plane original image chosen from the picture transmission window 17 before a game person's eye will appear, and the game person can recognize the fact of having won winning a prize [which].

[0044]As mentioned above, the slot machine 1 concerning

this embodiment, Provide a space part in the case 2, and arrange the stereoscopic picture generator 13 here, and. The picture transmission window 17 is formed in a part which is different in the pattern display 4 among the front panels 3, and since the stereoscopic picture which jumps out of here ahead is used as an announcement means, notice production which was rich in the unexpected nature accompanied by change of a game person's look can be performed, and it is effective in increasing interest.

[0045]Were set up the concave mirror 16 of the stereoscopic picture generator 13 separate from the 3rd page of a front panel, and connect a focus ahead, as a result in order that a stereoscopic picture may separate from the front panel 3 and may jump out ahead, the game person has usually doubled the focus of the eye with the pattern display 4, but. Since it is obliged to the change of the focus of an eye by the stereoscopic picture which appeared suddenly, the fact of a flag notice can be recognized certainly.

[0046]In the above-mentioned embodiment, the picture transmission window 17 for stereoscopic picture production is formed in the side position of the pattern display 4, and although, this part in particular is not limited. However, if the concave mirror 16 is arranged and it was made for a stereoscopic picture to appear before a game person's eye so that the focus of the concave mirror 16 may connect between a game person's eye, and the pattern display 4, The reel 6 and the game person of -- who the stereoscopic picture was displayed as it hung ahead at the reel pattern, and was gazing at the reel pattern as a result are more preferred at the point that information production which will recognize visually the stereoscopic picture which appeared suddenly and was extremely rich in unexpected nature can be performed.

[0047]And in the stereoscopic picture generator 13 concerning the above-mentioned embodiment, the half mirror 15 is lost, and even if it enters directly in the concave mirror 16 the light of the original image displayed with the image display device 14, a stereoscopic picture can be generated.

[0048]So that it may be in the case 2, for example, a space part may be established in the near position of the reel 6 on the other hand and a stereoscopic picture may appear in this space part, Since a stereoscopic picture will be displayed on the position which extended far back rather than the pattern display side (front panel 3) side if the focus of the concave mirror 16 is connected in a space part, the game person has usually doubled the focus of the eye with the pattern display 4, but. By the stereoscopic picture which appeared suddenly, it is obliged to the change of the focus of an eye, and the

fact of the display can be recognized certainly.

[0049]Said stereoscopic picture generator 13 is not limited only to the gestalt which carries out accommodation arrangement into the case 2, but it may be made to form this device 13 inside the decorative sheet allocated by the medal switchboard or floor between the shelf of the exterior of the case 2, for example, the upper part of the slot machine 1, and a stand, and the lower part of the slot machine 1 etc.

[0050]100% which does not perform the lottery in S200 of drawing 5, may be a notice type and a judgment in S220 is not made, i.e., it may be made to display only one kind of stereoscopic picture corresponding to both a special prize and an accessory case prize. Stereoscopic pictures may be any of a still picture and an animation.

[0051]Two or more kinds of flags to the stereoscopic picture information on 1 In the string attachment ** case. A string attachment ** case both flags of flag F_{BB} and a specific

accessory case prize for both the flag of a special prize, and the flag of an accessory case prize In namely, the string attachment ** case. Both flags of flag S_B and a specific

accessory case prize In the string attachment ** case. If a string attachment ** case etc. carry out both the flag of one in an accessory case prize, and other flags for both flag F_{BB} and flag R_B in a string attachment ** case and a plan is

elaborated, It cannot know immediately winning a prize and un-winning a prize with a notice, but since an opportunity to give a game person the hope of a special prize increases, a game person's speculative spirit can be instigated further.

[0052]It may enable it to identify a special prize and an accessory case prize (further BB incidence in it, RB winning a prize, each SB winning a prize) with the change of the plane picture of the second image display device that used the concave mirror 16 as the half mirror, and has been arranged to the back. For example, although the stereoscopic picture is the same, a mode, such as changing the contents of the color of a plane picture or a plane picture themselves which consists of backgrounds, can be considered.

[0053]And when it counts from the game where the flag stood after the fixed time of lever 8 operation when the timing of generating of announcement information (stereoscopic picture) was not limited only to the time when the lever 8 was operated, either, for example, push button operation of which stop button 9 was carried out and results in a predetermined game number, the flag stands, but. The time of generating of the arbitrary timing in the game in which winning a prize is not materialized, and a reach eye, etc. can be considered, and the generating time in particular

is not restricted, either.

[0054]The variation of a notice can be extended if a publicly known announcement means is used together not only from the announcement means concerning the above-mentioned embodiment but from the former.

[0055]In S100 of drawing 4, also when flag S_B of an

accessory case prize is set, it is made to perform a flag notice, but a flag notice is only a special prize and may not be made not to perform a flag notice about an accessory case prize.

[0056]It becomes special reel control by one of the roles of a pachislot after the end of a special prize in recent years, Although the slot machine (CT machine) provided with a possibility that a game person will come (a special prize and replay winning a prize are not arranged) to be arranged targeting an accessory case prize by himself and of rushing in at what is called a "challenge time" is provided, The announcing function concerning the above-mentioned embodiment is useful also to the notice of this CT lottery result.

[0057]The stereoscopic picture display by a stereoscopic picture generator, Only in the case of a flag notice, it is not limited, for example, during game execution of a special prize, it can carry out continuously or intermittently, can carry out at the time of formation of (when JAC-IN, it may be made for display information to change), a special prize, or an accessory case prize, or can use also as substitution of lamp display. When a slot machine is an idling (non-game position), it can grasp easily by displaying text, such as "welcome", as a stereoscopic picture, for example from the place which left to some extent which stand is vacant, and the effect which charms a game person is done so.

[0058]Next, one embodiment of a pachinko machine is described about the game machine concerning this invention based on a drawing.

[0059]Drawing 6 is an appearance perspective view of a pachinko machine. The pachinko machine 51 concerning this embodiment is provided with the following.

The outer frame 52 which consists of four frame pieces by which the framework was carried out so that the neighborhood of an approximately rectangle might be made. The front door 53 attached to this outer frame 52 enabling free opening and closing.

The game board 58 inserted in the seating rim (not shown) in the outer frame 52.

[0060]In said front door 53, the opening of big rectangular shape is formed from the center to the upper part, the transparent plates 54, such as a glass plate, are attached to

this opening, enabling free opening and closing, and the internal game board 58 can be recognized visually now via the transparent plate 54. The front door 53 is equipped with the handle 55 which operates the launcher (not shown) for firing a game ball towards the game board 58, the upper dish 56 for storing the game ball which should be supplied to a launcher, and the lower dish 57 for storing the game ball which cannot be stored in this upper dish 56.

[0061]The guide rail 59 formed circularly is arranged around said game board 58. Therefore, the game ball discharged from the launcher is guided at the guide rail 59, is led to the upper part of the game board 58, and falls below through between two or more game nails (not shown) driven into the game board 58.

[0062]The pattern display 60 which incorporated the liquid crystal display, for example is formed in the center section of said game board 58, and the start opening 61 in which an ON ball is possible is arranged in the game ball in this downward position. The awarded balls of the number beforehand set that a game ball carries out an ON ball to this start opening 61 are given, and the lottery for determining whether perform special game mode (is whether it is great success a gap?) is performed.

[0063]The display screen of the pattern display 60 is divided by three pattern display positions, for example, and serves as the mechanism in which patterns, such as a character, a number, a sign, a figure, and a character, are displayed, respectively in each division. If a game ball carries out an ON ball to the start opening 61, the pattern of the pattern display 60 will begin change and arbitrary patterns will be displayed on each division after specified time elapse. If three patterns gather, a lottery result will win the Dainyuu prize and three patterns generally will not gather, it is shown that the lottery result has not won the Dainyuu prize.

[0064]Under said start opening 61, the big prize port 62 opened and closed by the opening and closing plate 63 has been arranged, where the face of a board of the game board 58 is usually met, the opening and closing plate 63 has closed the big prize port 62, but. If a lottery result wins the Dainyuu prize, it is controlled for the opening and closing plate 63 to tilt and to open the big prize port 62.

[0065]As a result, the game ball which falls one by one towards the opening and closing plate 63 is led in the big prize port 62, and the awarded balls of that part and the number defined beforehand are given. On the other hand, an ON ball is not carried out to the start opening 61, the big prize port 62, etc., but the outlet 64 for collecting the game balls which fell on the guide rail 59 to the game machine book inside of the body is formed in the lower part of said

game board 58.

[0066]There is the feature of this embodiment in having carried the stereoscopic picture generator 65 in the game machine book inside of the body, as shown in drawing 7.

This stereoscopic picture generator 65 is provided with the following.

The image display device 66 which turned the display screen upward and has been arranged.

The convex lens 67 which is arranged above this image display device 66, and performs a both-way straight-line motion to a sliding direction by a vibration generating means (not shown).

The half mirror 68 arranged in this convex lens 67 upper part.

[0067]Said image display device 66 consists of a two-dimensional display which displays a superficial original image (cross section image of a stereoscopic picture) on the display screen, and it is [image display device] switchable in an original image at high speed. Inclined arrangement is carried out at the angle of 45 degrees to the light of the original image which enters from a lower part, and while changing direction ahead 90 degrees and reflecting the light in it, the light which enters from back can be made, as for said half mirror 68, to penetrate ahead as it is.

[0068]This stereoscopic picture generator 65 sets aside, it is arranged behind the half mirror 68 by the pattern display 69 for displaying the lottery result of the Dainyuu prize, and a game person, The picture of an image display device can be seen as a reflected figure of the half mirror 68 via the pattern display 60 from the exterior, and the half mirror 68 can be penetrated and the picture of the pattern display 69 can be seen. in addition -- the inner package of the image display device 66, the convex lens 67, and the pattern display 69 is carried out into the barrel 70 which met in the shape of an optical path, respectively -- each of the image display device 66 and the pattern display 69 -- diffusion and interference of light are prevented.

[0069]Here the distance of the flat-surface screen (image face) 66a of said image display device 66, and the half mirror 68, The distance of the flat-surface screen 66a of the image display device 66 and the lens 67 is set up shorter than the focal distance of the lens 67 shorter than the distance of the flat-surface screen (image face) 69a of the pattern display 69, and the half mirror 68.

[0070]If according to the stereoscopic picture generator 65 constituted in this way the lens 67 is vibrated by a vibration generating means and the original image displayed on the image display device 66 is suitably changed in this case,

The stereoscopic picture (solid virtual image) P of the image display device 66 by operation of the lens 67 will carry out image formation in a position further than the flat-surface screen 69a of the pattern display 69.

[0071]As a result, in the pattern display 60 usually, The pattern display by the pattern display 69 is performed (the pattern display 60). what performs full-screen displays including pictures, such as a background, -- it may be, when it becomes predetermined conditions, In addition to the plane picture of the pattern display 69, the stereoscopic picture of the image display device 66 can be replaced with the plane picture of a display or the pattern display 69, and only the stereoscopic picture of the image display device 66 can be displayed.

[0072]Even if a focal distance adopts a strange good lens (what is called a BARIFOKARU lens) instead of the composition to which both-way linear movement of the convex lens 67 is carried out, the same stereoscopic picture can be generated.

[0073]Drawing 8 is a block diagram showing the electric composition of the pachinko machine 51 concerning this embodiment. The pachinko machine 51 is provided with the control section 75 which has RAM78 and the random number generator 79 which are used for reading and writing of CPU76 which is a subject of control and an operation, ROM77 a game control program is remembered to be, and data.

[0074]Various kinds of input output sections are connected to said CPU76 via the bus 80. The start opening sensor 81 etc. which detect that the game ball carried out the ON ball to the start opening 61 as an input part are connected, and this signal is inputted into CPU76. The awarded-balls expenditure part 82 which pays out said pattern display 69, said opening and closing plate 63, and the awarded balls according to the kind of prize port as an outputting part, said stereoscopic picture generator 65, etc. are connected, and various kinds of outputting parts are controlled based on said input signal.

[0075]Like ****, whenever a game ball carries out the ON ball of this pachinko machine 51 to the start opening 61, it casts lots with the random number generator 79 of the control section 75, and it displays a pattern according to the lottery result. In recent years, the pachinko machine provided with the informing function which will change a screen, will display a specific character, or will emit a sound and light as a measure which raises the hope for a game person's game by the time a varied pattern stops and a "advance notice" [what is called] Becoming is provided.

[0076]Drawing 9 is a flow chart which shows the flow of

the processing which CPU76 performs. If it is supervising (S300) and a detection signal is outputted from the start opening sensor 81, whether the game ball carried out the ON ball of CPU76 to the start opening 61, Awarded balls are made to pay out the awarded-balls expenditure part 82 (S310), next it is judged whether it is whether flag F_{HT} for winning a prize is set, and among the Dainyuu prize (S320). [0077]and -- performing the lottery by the random number generator 79, when flag F_{HT} is not set (S330) -- this lottery result -- the Dainyuu prize -- winning (S340) -- CPU76 sets flag F_{HT} (S350).

[0078]In a lottery process, the random number value among which the random number generator 79 has counted CPU76 when a signal is outputted from the start opening sensor 81 is read, and it judges whether the winning-a-prize value beforehand determined as the read random number value is in agreement, and when in agreement, it presumes having won the Dainyuu prize.

[0079]A judgment whether an advance notice report is performed is also made in this lottery process. If in agreement with the value beforehand determined as the read random number value (S360), CPU76 will start the subroutine (S380) of an advance notice report, after making the pattern fluctuation of the pattern display 69 start (S370).

[0080]This subroutine is made by interrupting a picture (what is called a "cut-in") in the pattern display 60. Namely, display a predetermined picture on the image display device 66 of the stereoscopic picture generator 65 in a non-displaying condition (light volume is zero), and. The stereoscopic picture which starts the image display device 66 by giving oscillating instructions of the convex lens 67 at the back side of the plane picture concerning the pattern display 69 will appear, and the game person can recognize visually the fact that the advance notice report was performed. It may be made to improve the visibility of a stereoscopic picture by dropping the light volume of the pattern display 69 between this stereoscopic picture interruption processing.

[0081]CPU76 like the case (S360) where information processing is not performed, after an appropriate time, All the pattern currently changed (S390) is stopped after specified time elapse (S400), and when [with two or more displayed specific patterns] it is made to cooperate and is a pattern (S410), the Dainyuu prize is materialized and it shifts to special game mode (S420).

[0082]As mentioned above, the pachinko machine 51 concerning this embodiment, Since the stereoscopic picture displayed on the back side rather than the game screen

which establishes a space part in the game machine book inside of the body, arranges the stereoscopic picture generator 65 here, and is usually displayed in the pattern display 60 is used as an informing means, Information production which was rich in the unexpected nature accompanied by change of a game person's look can be performed, and it is effective in increasing interest.

[0083]The convex lens 67 of the stereoscopic picture generator 65, Since it is a display mode which it is set up connect a focus to the position further than the image face 69a of the pattern display 69 from the half mirror 68, and a stereoscopic picture separates from a plane picture as a result, and withdraws back, Usually, although the game person has doubled the focus of the eye with the image face 69a of the pattern display 69 in the pattern display 60, since he is obliged to the change of the focus of an eye by the stereoscopic picture which appeared suddenly, he can recognize certainly the fact that the advance notice report was carried out.

[0084]Although the pattern display 69 and the image display device 66 share an optical path partly, i.e., both a plane picture and a stereoscopic picture are displayed in the pattern display 60 in the above-mentioned embodiment, A transmission window is provided in the frame decoration or the front door 53 around a part other than this part, for example, a game board surface, and this game board, and it may be made to recognize a stereoscopic picture visually from here.

[0085]In the stereoscopic picture generator 65 of the above-mentioned composition, the relative relation of the distance of the image face 66a of the image display device 66, and the half mirror 68, and the distance of the image face 69a of the pattern display 69, and the half mirror 68, And although it is the game machine book inside of the body by adjusting the locating position of the lens 67, the stereoscopic picture concerning the image display device 66 can also be displayed on the near side of the plane picture concerning the pattern display 69.

[0086]On the other hand, it cannot be overemphasized that it may be made to make the front face of the game board 58 jump out of a stereoscopic picture using the stereoscopic picture generator 13 adopted as said slot machine.

[0087]Although the case of what is called a "big hit notice" that shows a possibility that the lottery result has won the Dainyuu prize, in the above-mentioned embodiment was explained, An information mode may be a case of "a reach advance notice" that shows a possibility that the remaining pattern except the pattern which is not limited only to this, for example, is displayed at the end is specific and of

making it cooperating and becoming a pattern (mainly the same pattern). [what is called] It may be made to display only one kind of stereoscopic picture corresponding to both advance notices, and may be made to display a respectively separate stereoscopic picture at this time. Several kinds of stereoscopic pictures may be prepared to each advance notice. Stereoscopic pictures may be any of a still picture and an animation.

[0088]When displaying a stereoscopic picture, it may be made be like thing **** which can adopt either in the case of displaying only either, when displaying both a stereoscopic picture and a plane picture in the case of advance notice report processing, but to change a plane picture from the usual thing to a thing for exclusive use at the time of an advance notice.

[0089]The stereoscopic picture display by a stereoscopic picture generator, Only in the case of an advance notice report, it is not limited, for example, carry out continuously or intermittently during game execution of the Dainyuu prize, or, In the case of the re lottery of the once materialized Dainyuu prize pattern when it carries out continuously or intermittently into specific game modes which election probability raises to the following Dainyuu prize, such as what is called "probability fluctuation mode" etc., or the Dainyuu prize is materialized further, it may be made to carry out.

[0090]Although the liquid crystal display is used for the pachinko machine concerning the above-mentioned embodiment as a pattern display, it may be the composition containing the reel display window which can recognize visually a part of circumference of some reels with which two or more patterns were expressed to the circumference, and these reels like a slot machine. When using an image display device as a pattern display, they may be image display devices, such as not only a liquid crystal display but a CRT display machine, and a plasma display.

[0091]If a game ball carries out the ON ball of the pachinko machine concerning the above-mentioned embodiment to the start opening 61, although a lottery is performed, For example, it is constituted so that passage of a game ball is possible, and if the start gate where expenditure of awarded balls is not performed by passage of a game ball, either is established in a game board and it passes through this start gate, a pachinko machine may be constituted so that a lottery may be performed.

[0092]And all the stereoscopic picture generators concerning known art can be used for the stereoscopic picture generator concerning this invention, without being limited to any of the above they are.

[0093]As composition of others which are displayed on the game machine book inside of the body, a stereoscopic picture, For example, the thing which has arranged the parallax barrier-type stereoscopic picture generator which arranged the slit plate on the front face of image display devices, such as a liquid crystal display, to the game machine book inside of the body, For example, the thing which has arranged the lenticular-type stereoscopic picture generator which arranged the lenticular lens on the front face of image display devices, such as a liquid crystal display, to the game machine book inside of the body, What has arranged the stereoscopic picture generator of the BARIFOKARU mirror type which made the half mirror incline ahead of a display, allotted, and arranged the variable focus rugged surface mirror in the direction of a reflector to the game machine book inside of the body, A rotary screen and a laser beam (in the case of a color) What has arranged the rotating scanning-type stereoscopic picture generator which consists of the laser of three colors being required to the game machine book inside of the body, What has arranged the stereoscopic picture generator of the display surface scanning type which linearity-moves or rotates a picture display surface in the vertical direction to this display surface to the game machine book inside of the body, and the thing which has arranged the holography-type stereoscopic picture generator which records using interference of light and reproduces a wave front to the game machine book inside of the body can be considered.

[0094]

[Effect of the Invention]Since the game machine applied to this invention like the above is constituted so that a stereoscopic picture may be displayed by formation of the conditions defined beforehand in addition to a pattern display, the visual recognition effect increases, and. A game person's interest is evoked and the stage effects of the game which was rich in the unexpected nature and interest of the look of the game person can be demonstrated.

[Translation done.]